AU-D250

Advanced DAC with HDMI Bypass and Audio Breakout

OPERATIONS MANUAL

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SAFETY PRECAUTIONS

Please read all instructions before attempting to unpack, install or operate this equipment and before connecting the power supply.

Please keep the following in mind as you unpack and install this equipment:

- Always follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.
- To prevent fire or shock hazard, do not expose the unit to rain, moisture or install this product near water.
- Never spill liquid of any kind on or into this product.
- Never push an object of any kind into this product through any openings or empty slots in the unit, as you may damage parts inside the unit.
- Do not attach the power supply cabling to building surfaces.
- Use only the supplied power supply unit (PSU). Do not use the PSU if it is damaged.
- Do not allow anything to rest on the power cabling or allow any weight to be placed upon it or any person walk on it.
- To protect the unit from overheating, do not block any vents or openings in the unit housing that provide ventilation and allow for sufficient space for air to circulate around the unit.

REVISION HISTORY

VERSION NO.	DATE	SUMMARY OF CHANGE
v1.01	18/03/13	First release

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1. INTRODUCTION

The AU-D250 is designed to integrate and convert both analogue and digital audio signals into any AV system. This device has an in-built sample rate converter which can upscale audio signals between 44.1kHz to 192kHz (24 bit). With HDMI connectivity, allowing the user to embed or de-embed audio within the HDMI signal path, the AU-D250 not only provides a truly enhanced listening experience, but also the flexibility to manage all audio signals in your AV system.

For professionals the Ti TPA6120A2 headphone amplifier, XLR (Low noise Professional Balanced output) and 6.3mm headphone jack (3.5 mini-jack adaptor supplied) offer unparalleled audio quality. With a highly accurate PLL and low jitter reduction clock system and an OLED display and IR remote for controlling the device, the AU-D250 is an incredibly useful tool for getting the most out of your audio devices.

2. APPLICATIONS

- Advanced DAC with Multiple input/output
- Audio format and sampling rate conversion
- Professional audio system integration with XLR balanced outputs
- MAC/PC audio output to professional speakers/headphones
- Analogue to digital or digital to analogue audio conversion
- HDMI audio embedding or de-embedding

3. PACKAGE CONTENTS

- Advanced DAC with HDMI Bypass and Audio Breakout
- 1×Remote Control (with battery)
- 6.5mm to 3.5mm phone jack adaptor
- 5V/3.6A DC Power adaptor
- Operation Manual

4. SYSTEM REQUIREMENTS

Input source equipment such as PC (USB) or DVD player with relevant connection cables and output to amplifier, active speakers or headphones

5. FEATURES

Main

- 6 Input, 6 Output Advanced DAC
- 4 Digital Inputs, 2 Analogue Inputs
- 3 Digital Outputs, 2 Analogue Outputs and Headphone Output
- Full system control from IR remote or main control dial via OLED display.

Digital

- HDMI, USB, Optical and Coaxial digital audio inputs support LPCM stereo
- HDMI input supports LPCM stereo in all modes but can pass surround sound signal whilst in bypass mode
- All digital inputs support 192kHz sampling rate at up to 24-bit resolution
- HDMI, Optical and Coaxial digital outputs
- All digital inputs can be SRC (Sample Rate Conversion) to 44.1, 48, 88.2, 96, 176.4 and 192 kHz via DSP Engine (Digital Signal Processing)
- Highly accurate PLL and low jitter reduction clock system
- HDMI Audio output (video is always bypassed to HDMI output) can either output the incoming HDMI (HDMI Bypass Mode) or embed the selected audio signal (HDMI Input Mode)

Analogue

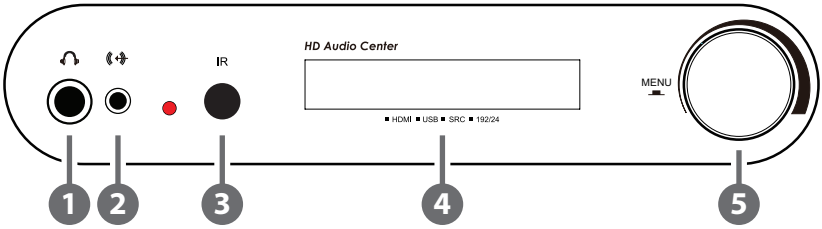
- Built-in Ti TPA6120A2 high quality headphone amplifier output
- Professional XLR balanced stereo output
- RCA analogue stereo output
- RCA analogue stereo input
- Mini-jack (3.5mm) stereo input
- Total Harmonic Distortion (THD): Less than 100dB (-20dBFS)
- Analogue inputs provide digital output sampling rates up to 192 kHz

Misc

- IR Remote with direct source, power and mute buttons
- HDMI audio embedding or de-embedding
- Volume control of analogue and headphone outputs or just headphone output via remote or main control dial
- Direct power and mute button on unit
- High viewing angle OLED display
- Headphone output fades in after system is muted
- 6.3mm headphone output (3.5mm mini-jack adaptor supplied)

6. OPERATION CONTROLS AND FUNCTIONS

6.1 Front Panel

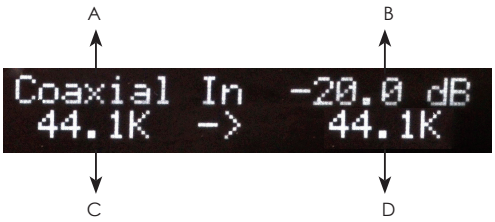


1. **6.5mm Headphone Jack**: Connect to a 6.5mm professional headphone set for the user to enjoy the individual professional audio sound.

2. **3.5mm Front IN**: Connect with 3.5mm mini-jack cable from any audio equipment for stereo audio input.

3. **IR:** IR receiver window, accepts the IR signal from the supplied remote control.

4. **OLED:** Displays the input/output selection, volume setting, sampling rate and audio channels..

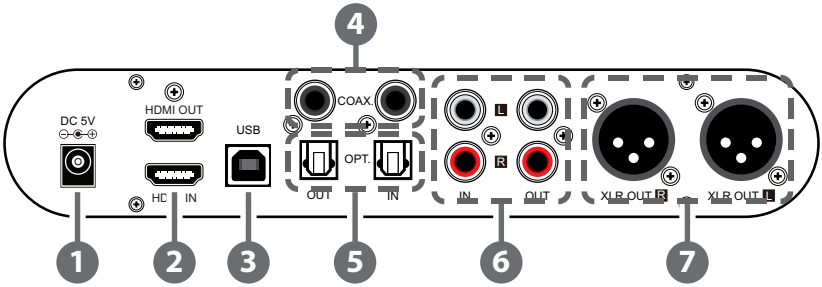


A. Input Source
B. Headphone or analogue line level volume or system mute
C. Input sample-rate
D. Output sample-rate

5. **Menu & Volume controller:** Turn to adjust the volume. Press inwards to enter into the menu and turn it to select the desire setting, press again to confirm the selection.

   Note: The Volume and Mute functions only affect the headphone and analogue line-out volume levels, all other outputs are not affected.

6.2 Rear Panel



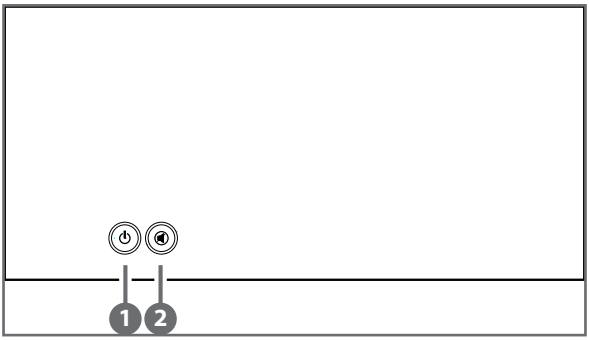
1. **DC 5V:** Plug the 5V DC power supply into the unit and connect the adaptor to an AC outlet.
2. **HDMI IN/OUT:** Connect to a HDMI source such as a satellite box or DVD Audio player and output to a HDMI HDTV/monitor for display output.
3. **USB:** Connect to a PC/MAC source for USB audio signal input.
4. **COAX OUT/IN:** Connect the COAX IN to an coaxial digital audio input source such as set-top box or CD Player and the COAX OUT to an amplifier or active speakers with a coaxial cable.
5. **OPT. OUT/IN:** Connect the OPT. IN to an optical digital audio input source such as a DVD/Blu-ray player or PS3 and the OPT. OUT to an amplifier or active speakers with an optical cable.
6. **L/R IN/OUT:** Connect the L/R IN to an analogue stereo input source such as a CD Player or media player and the L/R OUT to amplifier or active speakers with RCA jack cable.
7. **R/L XLR OUT(Balanced): XLR L/R OUT:** Connect to an amplifier with balanced XLR inputs or directly to professional balanced equipment with XLR cables

Note:

HDMI Input mode: In this mode, whatever audio input is selected will be routed to the HDMI output as well as all other outputs.

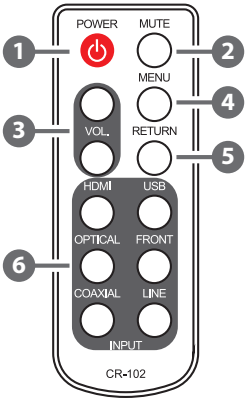
HDMI Bypass mode: In this mode HDMI video and audio will always be routed to the HDMI output no matter what input is selected, whilst all other outputs will output the audio from the selected input. This function allows the user to have two distinct audio pathways throught the unit.

6.3 Top Panel



1. **POWER:** Press this button to switch on the device or set to standby mode.
2. **MUTE:** Press this button to mute or unmute the audio volume instantly.

6.4 Remote Control

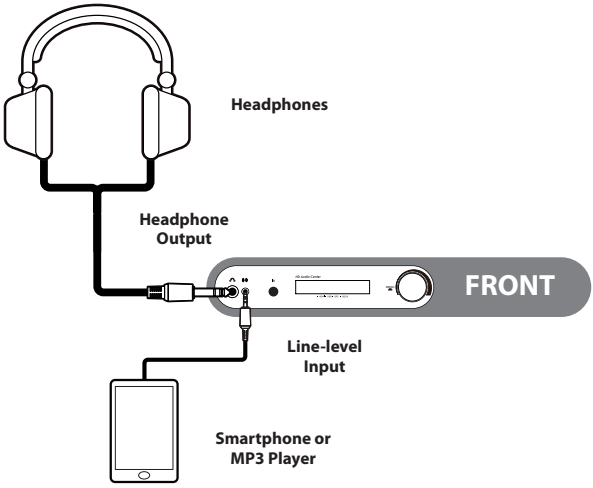


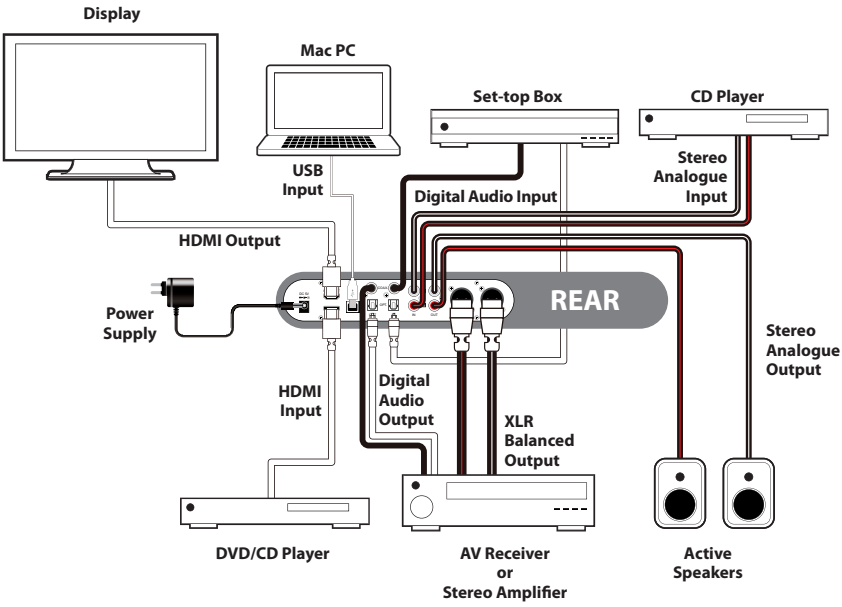
1. **POWER**: Press this button to turn On or to set the device in standby mode.
2. **MUTE:** press this button to mute or unmute the audio volume instantly.
3. **VOL. Up/Down**: Press these buttons to turn up or down on the output audio volume.
4. **MENU:** Press these button to enter into the menu selections then press the up/down buttons to select and press it again to confirm the selection.
5. **RETURN**: Press this button to return or exit the menu selection.
6. **INPUT:** Press these hot keys to switch the input sources instantly.

6.5 OLED Menu

1ST LAYER	FULL NAME	2ND LAYER
Source In	Source Selection	**HDMI In**
		USB In
		Optical In
		Coaxial In
		Line In (L/R In)
		Front In
		Return
SRC Set	Sampling Rate Conversion Setup	**Bypass**
		192 kHz
		176.4 kHz
		96 kHz
		88.2 kHz
		48 kHz
		44.1 kHz
		Return
HDMI TX Set	HDMI Output Setup	**Bypass**
		Input
		Return
Display Set	Display Time Out Setup	**TimeOut 5s**
		TimeOut 10s
		TimeOut 15s
		Return
HP Impedance	Headphone Impedance	**16 Ω**
		32 Ω
		64 Ω
		200 Ω
		300 Ω
		600 Ω
		Return
Line Out Set	Headphone/Line Out Setup	**Fix Level**
		Volume Level
		Return
Reset to Default		**OK**
		Return
Return		

7. CONNECTION DIAGRAM





8. SPECIFICATIONS

Input Ports	1×HDMI, 1×USB (Type B), 1×Coaxial, 1×Optical, 1×L/R (Analogue Stereo 2RCA), 1×3.5mm Phone Jack (L/R)
Output Ports	1×HDMI, 1×Coaxial, 1×Optical, 1×L/R (Analogue Stereo 2RCA), 1×XLR (Balanced Analogue Stereo), 1×6.3mm Phone Jack (Headphone)
Digital Audio I/O Support	LPCM 2CH
Stereo Audio I/O Level	2 Vrms ±0.2
XLR Blanced I/O Level	4 Vrms ±0.2
Headphone Impedance	16 Ω ~ 600 Ω
ESD Protection	Human body model: ±8 kV (air-gap discharge) ±6 kV(contact discharge)
Power Supply	5 V/3 A DC (US/EU standards, CE/FCC/UL certified)
Dimensions	138 mm (W)×223 mm (D)×50 mm (H)
Weight	680 g
Chassis Material	Aluminum
Colour	Black
Power Consumption	15 W

9. ACRONYMS

ACRONYM	COMPLETE TERM
COAX	Coaxial
HD	High Definition
HDMI	High-Definition Multimedia Interface
OLED	Organic Light-Emitting Diode
OPT	Optical
PLL	Phase Locked Loop
SRC	Sample Rate Conversion
THD	Total Harmonic Distortion

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